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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/607,890	06/30/2000	Klaus T. Reichel	4100-194	1213

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EXAMINER

WILLIAMS, KEVIN D

ART UNIT PAPER NUMBER

2854

DATE MAILED: 08/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/607,890

Applicant(s)

REICHEL, KLAUS T.

Examiner

Kevin D. Williams

Art Unit

2854

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7 and 8 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-5,7 and 8 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 30 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barnett (US 45,144,811) in view of Knauer (US 6,050,190), Ghosh (US 5,925,496) and Applicant's admitted prior art (AAPA).

Barnett teaches a printing unit cylinder for a rotary printing machine, said printing unit cylinder being a transfer cylinder 52 for receiving a rubber blanket (col. 4, line 15) in which localized temperature differences occur, said printing unit cylinder comprising a body having a barrel 52 as a centerpiece. Barnett provides a discussion of how increases in temperature can lead to thermal expansion of printing cylinders and in turn a degradation of the print quality (col. 3, line 65 to col. 4, line 23). Barnett discloses that because printing cylinders are made from steel and aluminum, which have relatively high linear coefficients of expansion, thermal expansion cannot be avoided. Barnett therefore discloses an adjustment mechanism to relieve the pressure that results from expansion of the printing cylinders.

Barnett does not teach the entire transfer cylinder or the barrel being made completely of a metallic material having a linear coefficient of expansion of about $\alpha < 1.5 \times 10^{-6} \text{ K}^{-1}$ in a temperature range of from 20° to about 60°. Barnett also does not

Art Unit: 2854

disclose an iron alloy having about 36% nickel by weight. Barnett only provides a schematic drawing of the printing unit and therefore does not disclose the journals of the transfer cylinder, where one journal is on each side of the barrel of the cylinder.

Ghosh discloses several metallic materials that are advantageous in producing printing cylinders and that printing cylinders can be composed of one or more metals including iron and nickel (col. 7, lines 57-61).

Applicant's admitted prior art (pg. 7, lines 1-14) discloses a known metallic material comprising iron and nickel that comprises an iron alloy having about 36% nickel by weight and having a linear coefficient of expansion of about $\alpha < 1.5 \times 10^{-6} \text{ K}^{-1}$ in a temperature range of from 20° to about 60°.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Barnett to have the entire cylinder of Barnett be made of the material disclosed in AAPA, in order to avoid thermal expansion of the transfer cylinder as discussed by Barnett.

Knauer teaches two journals, a respective one of the journals being on each side of a barrel (Figs 5a, 5b, and 5c).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Barnett to have journals as disclosed by Knauer, in order to stably mount the cylinder in a frame for utilization in a printing press.

Response to Arguments

3. Applicant's arguments filed 4/23/2004 have been fully considered but they are not persuasive.

Applicant argues that none of the prior art of record discloses the problem of localized differences in temperature in transfer cylinders. Barnett discloses the problem of localized temperature differences in column 4, lines 2-14. Barnett also discloses that the localized temperature differences have a considerable negative effect on print quality.

Applicant argues that Barnett fails to disclose a transfer cylinder. Applicant states that the cylinder 52 of Barnett is not a transfer cylinder, but rather a cylinder that carries a printing saddle or plate. Barnett does disclose, in column 5, lines 53-55, that the printing cylinder can have printing saddles and plates. Barnett also discloses, in column 4, lines 14-15, that the printing cylinder 52 can be a typical transfer cylinder encased in a rubber blanket.

Applicant argues that Ghosh fails to provide any motivation for using a metallic material having a linear coefficient of about $\alpha < 5 \times 10^{-6} \text{ K}^{-1}$ in a temperature range of from about 20° to about 60°. The examiner relies on Barnett for motivation to use a material having a linear coefficient of about $\alpha < 5 \times 10^{-6} \text{ K}^{-1}$ in a temperature range of from about 20° to about 60° for constructing a printing cylinder, since Barnett discloses the problem of localized temperature differences in printing cylinders and cites the large coefficients of expansion of the materials used to construct the cylinders as a problem. Ghosh discloses that printing cylinders are typically constructed of various combinations of metals, including iron and nickel. At the time of the present invention, there was in existence a metallic material comprised of iron and nickel and known for having an extremely low linear coefficient of expansion. AAPA discloses the existence of this

Art Unit: 2854

known metallic material. The examiner takes the position that since Barnett disclosed the problem of thermal expansion in printing cylinders noted in the instant invention and cited the coefficient of expansion of the material used to make the cylinders as a factor in the problem, it would have been obvious to one of ordinary skill in the art to use a material already in existence and known for having an extremely low coefficient of thermal expansion to construct a print cylinder, since the known material is comprised of iron and nickel, a combination of materials already known to be useful for constructing printing cylinders, as Ghosh discloses.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin D. Williams whose telephone number is (571)

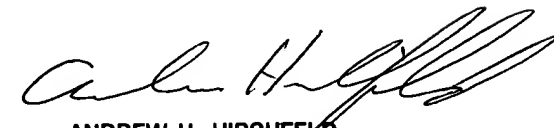
Art Unit: 2854

272-2172. The examiner can normally be reached on Monday - Friday, 8:30am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew H. Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KDW
July 27, 2004



ANDREW H. HIRSHFELD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800